Inventor(s): Manoharan, et al.

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Figure 1

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Figure 2

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Figure 3

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Figure 4

60% yield

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Figure 5

N<sup>10</sup>trifluoroacetyl Pteroic Acid

α-isomer of folic acid-nucleoside conjugate

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Figure 6

Fully protected nucleoside folic acid  $\gamma$ -conjugate phosphoramidite, 66% yield

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Figure 7

Fully protected nucleoside folic acid  $\alpha$ -conjugate phosphoramidite, 60% yield

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Figure 8a

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Figure 8b

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Figure 9

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Appln. No: Not yet Assigned

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Figure 10

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Figure 11

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Figure 12

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Figure 13

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Figure 14

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Figure 15

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Figure 16

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Figure 17

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Figure 18

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Figure 19

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Figure 20

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Figure 21

79a R=Me 79b R=Ally1

a: P=0 backboneb: P=S backbone

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Figure 22

80a,b R=Me; Y=T 81b R=Me; Y=[4,6-<sup>14</sup>C]-T

82a,b R=Allyl; Y=T

a; P=0 backbone b; P=S backbone

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Figure 23

83a,b X=OH; Y=T 84b X=OH; Y=[4,6,-14C]-T 85a X=NH<sub>2</sub>; Y=T 86a X=CH<sub>3</sub>NH; Y=T a: P=O backbone b: P=S backbone